DOCKET NO: UPAP0025-100 (K1763)
PATENT APPLICATION

Serial No.: 09/719,067
Filed:August, 16 2001

REMARKS

Status of the Claims

Claims 1-3 and 5-31 were rejected. Claim 3 has been cancelled. Claim 4 was canceled in an amendment filed January 6, 2003. Claim 1 has been amended to incorporate the elements of claim 3 and, therefore, does not present new issues requiring further consideration or search. Claim 11 has been rewritten in independent form incorporating the elements of claim 9 and, therefore, does not present new issues requiring further consideration or search. Claim 31 has been rewritten in independent form incorporating the elements of claim 25 and, therefore, does not present new issues requiring further consideration or search. Upon entry of this amendment claims 1-2 and 5-31 will be pending.

No new matter has been added.

Rejections under 35 U.S.C. § 112

Claims 1-3 and 5-8 stand rejected under 35 U.S.C. § 112, first paragraph, because allegedly the specification, while being enabling for an *in vitro* method of delivering a protein to a macrophage cell or a cell of macrophage derived lineage, does not reasonably provide enablement for an *in vivo* method. Applicants respectfully disagree.

Claims 9-31 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not describe in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The Office alleges, "Applicants' arguments that data provided is sufficient for drug approval by FDA are irrelevant because the issue here is patentability and not drug approval." (Office Action, page 4). Applicants respectfully point out that Applicants never made any such characterization, (see, Applicants' response filed, June 25, 2003) and agree that the standards for patentability are not that same as used by the FDA for drug approval.

The Office also alleges:

> 'Figure 7 is a diagrammatic representation of a plasmid called pNeZCD3alpha.1, however, it is not clear as to what encoding sequence was used in this vector.' Applicants have argued that specific DNA molecule is not limited. These arguments are not persuasive because the figure recites a particular plasmid and for an artisan to make that plasmid artisan will require what the coding sequence is, even though different fragments could be cloned in the plasmid.

(Office Action, page 3). Applicants respectfully remind the Office that ***none*** of the pending claims refer to the plasmid that is illustrated in Figure 7 of the present application and none of the claims recite "pNeZCD3alpha.1." Therefore, the exact sequence of the plasmid is not needed for the patentability of the pending claims. A person of ordinary skill in the art can use any plasmid that is suitable for the expression of a protein and engineered the plasmid to include a macrophage specific promoter. Based on the specification of the present application a person of ordinary skill in the art would know what is meant by a "macrophage specific promoter" and a person of ordinary skill in the art would know how to clone a macrophage specific promoter into a DNA molecule or a plasmid. Cloning the promoter of one gene into a DNA molecule or plasmid is routine. It is routine for a person of ordinary skill in the art to be able to identify the promoter region of a gene and determine if that promoter is macrophage specific. It involves nothing more than simple cloning techniques and mutagenesis to determine the boundaries of a promoter as well as whether the promoter is macrophage specific. As the Federal Circuit has stated, it is not that amount of experimentation that is important, rather it is whether the experimentation is undue. Since, the experimentation that may be required to identify macrophage specific promoters is nothing more than routine, a person of ordinary skill in the art would be able to make and use the pending invention. Furthermore, the specification provides examples of macrophage specific promoters that can be used by one of ordinary skill in the art.

The Office further alleges:

> The specification does not provide any specific guidance as to what amount of plasmids or vectors will be administered, rather the specification does not provide any specific

> guidance to practice the claimed method. Therefore, an artisan of skill would have depend on the art for practicing the claimed methods and as discussed below the art of in vivo gene delivery and gene therapy is unpredictable, particularly vector construction and design.

(Office Action, page 3). Applicants respectfully disagree.

Applicants have provided guidance "as to what amounts of plasmids or vectors will be administered." (see, for example, page 24, lines 1-11). Applicants have also provided examples of DNA molecules that were administered *in vivo* and demonstrated the expression of a protein using a macrophage specific promoter (see, for example, pages 27-39). Applicants have also demonstrated lymphnode localization (see, for example, pages 33 and 38). Therefore, Applicants have enabled the present invention. The Office also alleges that references of Crystal, Anderson, and Clark illustrate the "known limitations" of "gene therapy and vector targeting." (Office Action, page 4). However, the references of Crystal, Anderson, and Clark do not suggest that the limitations of the gene therapy are insurmountable. Even if the cited references suggest that there are limitations to ***prior*** usages of gene delivery, which differ from the claimed invention, the present specification provides working examples of *in vivo* delivery of a protein to a macrophage according to the claimed methods. Therefore, although the references may have been correct at the time they were published for the technology discussed in them, Applicants provide evidence that demonstrates the opposite for the claimed invention and, therefore, enables the claimed invention.

The Office is respectfully reminded that the specification must be accepted to be true unless there is reason to doubt the truth of Applicants' disclosure. As discussed in the M.P.E.P:

> it is incumbent upon the Patent Office, whenever a rejection ... is made, to explain why it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. Otherwise, there would be no need for the applicant to go to the trouble and expense of supporting his presumptively accurate disclosure.

(MPEP § 2164.04, citations omitted). The Office has failed to produce any evidence or reasoning to show that the facts and evidence within the specification are not accurate. Additionally, the court has stated:

> As a matter of Patent Office practice, then, a specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as in compliance with the enabling requirement of the first paragraph of § 112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support.

In re Marzocchi 439 F.2d 220, at 223. Therefore, the Office must accept that Applicants' specification is accurate since the Office has failed to produce any reasons to doubt the truth or validity of the statements contained in the specification. When all the evidence in the record is weighed, Applicants' evidence is sufficient to establish the enablement of the invention in view of the references cited by the Office.

The Office also alleges "It is noted that claims are also directed to administration of a vector to lymph nodes at any site so that the vector is administered to the lymph nodes, however, the specification does not teach any specific description of where and how the administration will be carried out." (Office Action, page 3). Applicants respectfully disagree. The specification of the instant invention provides adequate guidance how to make and use the present invention. The specification states in the "Background of the Invention" that "it is generally accepted that the majority of antigen in the blood is processed for antigen presentation in the spleen and antigens in tissue are transported and then processed and presented in the lymph nodes." Therefore, a person of ordinary skill in the art would expect and understand that antigen (*e.g.* a DNA molecule) would be "transported" and "processed and presented in the lymphnodes." In the section entitled "Description of Preferred Embodiments" Applicants state "[t]he invention arises from the discovery that macrophage take up DNA administered by direct DNA administration and that such transfected macrophage migrate to lymphnodes."

(page 7, lines 25-26). Therefore, a person of ordinary skill in the art would understand that the "direct DNA administration" would result in the DNA molecule finding its way to a macrophage cell or a cell of macrophage derived lineage.

The claimed invention is enables a person of ordinary skill in the art to deliver a DNA plasmid molecule which is operably linked to a macrophage specific promoter and a polyadenylation signal that is functional in a macrophage cell or cell of macrophage derived lineage and that the DNA molecule is expressed in the cell (claim 1). The specification demonstrates the expression of a DNA molecule *in vivo* in a macrophage specific cell or a cell of macrophage derived lineage (see, for example, page 26-40, and page 33, lines 22-30).

Claim 5 incorporates the elements of claim 1 and specifies the names of macrophage specific promoters. As discussed above, a person of ordinary skill in the art would know how to make and use the present invention with different promoters and therefore, claim 5 is enabled commensurate with its scope and can be made and/or used by one of ordinary skill in the art.

The present invention also is enabled for a method of delivering a protein to a lymphnode of an individual comprising the steps of identifying the lymphnode, locating a site on the individual's body that is proximal to the lymphnode and administering a DNA molecule that is linked to a promoter and that the DNA molecule is taken up by a macrophage cell or a cell of macrophage derived lineage and is expressed in the cell (Claim 9). A person of ordinary skill in the art would know how to identify a lymphnode for the delivery of a protein. A person of ordinary skill in the art can identify a site that is proximal to the lymphnode. The specification also provides guidance to those of ordinary skill in the art on choosing a site. The specification states, "Sites are chosen for delivery to lymphnodes based on the anatomical draining pattern" (Specification, page 12, lines 23-24). The anatomical draining pattern of an individual is known to those of ordinary skill in the art and is, therefore, routine. It is also within the skilled artisan's knowledge based on the specification and the prior art how to administer a DNA molecule at a site on an individual that has been identified using steps a) and b) of claim

9. Therefore, claim 9 is enabled for its entire scope and a person of ordinary skill in the art would know how to make and use the invention based on Applicants' specification. Additionally, Applicants have provided examples of lymphnodes that can be targeted by the administration of a DNA molecule (see, for example, page 33, lines 9-21). Claim 11 incorporates all the elements of claim 9 and specifies that the DNA molecule is a plasmid and is, therefore, enabled and a person of ordinary skill in the art would know how to make and use the present invention with a plasmid.

Claim 18 recites a method of inducing an immune response against an individual by administering a DNA molecule. As discussed above, it is accepted that a DNA molecule at the site of administration is taken up by a macrophage cell and or a cell of macrophage derived lineage. Once the DNA is taken up by the cell, the immunogen will be expressed and thus, induce an immune response. The specification also provides working examples of inducing an immune response (see, for example, page 30, lines 4-12). Therefore, it is clear that claim 18 and the claims that depend upon claim 18 are enabled and that based on the specification a person of ordinary skill in the art would be able to make and/or use the present invention.

Claim 23 recites a method of modulating an individual's immune system. The Specification, as discussed above, demonstrates the expression of several proteins using the claimed invention *in vivo*. For the reasons discussed above claim 23 is enabled because a person of ordinary skill in the art would be able to express a protein that one would wish to express using Applicants' disclosure as a guide. Based on Applicants' disclosure one of ordinary skill in the art would be able to express an immunomodulating protein and modulate an individual's immune system. Therefore, claim 23 and claims that depend from it are enabled and a person of ordinary skill in the art would know how to make and/or use the present invention.

Claim 25 recites a method of eliminating cells in a lymphnode of an individual. A person of ordinary skill in the art would expect that the expression of a cytotoxic protein in a lymphnode would eliminate the lymphnode. Applicants have demonstrated expression of a protein in a lymphnode (see, for example, pages 24-33) and, therefore,

one of skill in the art would accept that the expression of a specific cytotoxic protein in a lymphnode would eliminate the lymphnode. As discussed above, the Office has failed to provide any reasoning or evidence to demonstrate that the examples supplied in Applicants' specification are not accurate and, therefore, not enabled. Accordingly, claim 25, and its dependent claims are enabled and one of skill in the art would know how to make and/or use the present invention.

Claim 29 recites a method of delivering a desired protein to an individual. The specification provides examples of a DNA molecule being administered *in vivo* and that the administration of the DNA molecule leads to the expression of the desired protein (see, for example, page 33). For the reasons stated above claim 29 and its dependent claims are enabled and a person of skill in the art would know how to make and/or use the present invention. Claim 31 incorporates the elements of claim 29 and further specifies that the DNA molecule is a plasmid, and is thus also enabled for reasons discussed above.

As discussed above, Applicants have provided sufficient evidence demonstrating that the claimed invention is enabled. The Office must accept the Applicants' disclosure as true, unless the Office can supply evidence that would bring into question the validity of the disclosure. The Office has failed to produce evidence that would raise doubt as to the validity of Applicants disclosure and, therefore, Office must accept that the present invention is enabled.

Applicants also respectfully remind the Office that some amount of experimentation performed by one of ordinary skill in the art is *not* undue. The M.P.E.P. states:

> The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed.

(M.P.E.P. § 2164.06, citing *In re Wands*, 858 F.2d 731). Applicants have provided more than a reasonable amount of guidance (see, for example, entire specification, which includes guidance as well as working examples) with respect to the direction of using the

present invention and therefore, no burden is placed upon a person of ordinary skill in the art to make and/or use the claimed invention.

The Office also alleges that "while the claims do not recite treating a disease, that is the intent of the claimed method. It is noted that while limitations appearing in the specification cannot be read into the claims, claims have to be enabled for the intended use." (Office Action, page 4). Applicants respectfully disagree. As MPEP §2164 states:

> As long as the specification discloses at least one method for making and using the claimed invention that bears a reasonable correlation to the entire scope of the claim, then the enablement requirement of 35 U.S.C. 112 is satisfied. ***Failure to disclose other methods by which the claimed invention may be made does not render a claim invalid under 35 U.S.C. 112.***

(citations omitted, emphasis added). Applicants specification discloses at least one method for making and/or using the claimed invention and the disclosure bears a reasonable correlation to the entire scope of the claim. Applicants disclose, for example, how to administer a DNA molecule, how to identify a lymph node, how to express a protein in a macrophage or a cell of macrophage derived lineage, and how to induce an immune response. Although some embodiments of the present invention may be used treat a disease, the treatment of disease is not an element of the claim and is not the only use of the claimed methods. The claimed methods can be used, for example, to monitor the expression and effect of a protein expressed in a macrophage cell or a cell derived from a macrophage. The claimed methods can also be used to generate antibodies. Polyclonal antibodies, such as those produced using the present invention, are routinely produced and purified. The antibodies can then be used for many applications including, but are not limited to, protein detection and purification of the molecule that binds to the antibody. Therefore, the disclosed methods are enabled even if the specification does not disclose other methods by which the claimed invention may be made and/or used.

Accordingly, the specification enables a person skilled in the art to which it pertains to make and use the invention commensurate in scope with the pending claims.

In view of the foregoing, Applicants respectfully request that the rejection under 35 U.S.C. § 112 be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 1-3 and 5-8 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Malik *et al.*(*Blood* 86:2993-3005, 1996, hereinafter "Malik") in view of Dropulic *et al.* (U.S. Patent No. 5,887,767, hereinafter "Dropulic"), Kataoka *et al.* (*Journal of Biological Chemistry* 272:18209-18215, 1997, hereinafter "Kataoka") and Horvai *et al.* (*PNAS* 92:5591-5393, 1995, hereinafter "Horvai"). Applicants respectfully disagree.

The Office found that Applicants' arguments filed June 25, 2003 to have not been persuasive to overcome this objection which was initially presented in the Office Action mailed March 27, 2003. The Office suggests, that Dropulic discusses contacting a host cell in vivo or in vitro with a HIV vector which is a DNA molecule and that "it is noted that in the instantly pending case, the claim does not exclude a viral vector." (Office Action, page 5). Applicants respectfully point out that claim 1 as amended recites that the DNA molecule is a plasmid. Therefore, even if the previously present claim 1 was obvious, which it was not, the newly amended claim is not obvious because none of the references teach or suggest administering a DNA molecule that is a plasmid. There is no motivation within any of the references either alone or in combination to use a plasmid, since both Malik and Dropulic discussing using viral vectors. A plasmid ***is not*** a viral vector. A person of skill in the art would not have been motivated by the art to use a plasmid to deliver a protein to a macrophage cell or a cell of macrophage derived lineage. Furthermore, a person of ordinary skill in the art would not have had an expectation of success if they were to use a plasmid, since the properties of a plasmid are different from those of viral vectors. Therefore, the Office has failed to demonstrate that the cited references render claim 1 obvious.

The Office has failed to demonstrate a *prima facie* obviousness case against the claims 1, 2, and 5-8. The Office alleges that "at the time of the invention it would have

been obvious to an artisan of ordinary skill to modify the vectors of Malik *et al.* by substituting the promoters of CD156 gene, scavenger receptor gene or any other macrophage cell specific promoters with a reasonable expectation of success and administer the vector to an individual to delivering a gene of interest to macrophages." (Office Action, page 5). Applicants respectfully disagree.

Malik discusses retroviral-mediated gene expression in human myelomonocytic cells comparing hematopoietic cell promoters to viral promoters. Malik discusses infecting cells with a retrovirus produced by a packaging cell line. (see, Malik *et al.*, page 2994 under "Materials and Methods").

A well known fact to one of ordinary skill in the art is ability of retroviruses to transduce a gene into dividing cells, but that retroviruses cannot transduce a gene into non-dividing cells. A macrophage cell and/or a cell derived from a macrophage cell that are recited in the pending claims do not undergo cell division. Therefore, a person of ordinary skill in the art would not have been motivated to use the teachings of Malik and modify the retroviral vectors in Malik because there would have been no expectation of success to deliver a protein to a cell that is not undergoing cell division. Accordingly, the vectors of Malik would be inoperable, even if modified, if used in the present invention. Malik teaches away from delivering DNA molecules to non-dividing cells. One skilled in the art would not refer to Malik to design constructs to be used in non-dividing cells.

Furthermore, as discussed in Applicants' previous response filed June 25, 2003, the retroviruses of Malik contain RNA, not DNA, and there would have been no motivation to use a DNA molecule and/or plasmid based on Malik even in view of the other cited references. None of the cited reference suggest modifying an RNA retrovirus into a DNA molecule or "DNA retrovirus", if such a retrovirus were possible. Therefore, the cited references do not render claims 1-3 and 5-8 obvious.

In establishing a *prima facie* case of obviousness under 35 U.S.C. §103, it is incumbent upon the Examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. *Ex parte Clapp*, 227 U.S.P.Q. 972 (Bd. Pat. Apages Int.

1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from appellants' disclosure, see for example, *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988); and *Ex parte Nesbit*, 25 U.S.P.Q.2d 1817, 1819 (Bd. Pat. Apages Int. 1992). In this respect, the following quotation from *Ex parte Levengood*, 28 U.S.P.Q.2d 1300, 1302 (Pat. Off. Bd. Apages 1993), is noteworthy:

> Our reviewing courts have often advised the Patent and Trademark Office that it can satisfy the burden of establishing a *prima facie* case of obviousness only by showing some objective teaching in either the prior art, or knowledge generally available to one of ordinary skill in the art, that "would lead" that individual "to combine the relevant teachings of the references." ... Accordingly, an examiner cannot establish obviousness by locating references which describe various aspects of a patent Applicants' invention without also providing evidence of the motivating force that would ***impel*** one skilled in the art to do what the patent Applicants have done. (citations omitted; emphasis added)

Significantly, the Office Action identifies no "motivating force" that would "impel" persons of ordinary skill to modify the respective teachings of the cited references and achieve the claimed invention.

Rather, the Office Action makes a general statement that it would be obvious to combine teachings of a reference discussing a particular retroviral vector with a reference that discusses a specific promoter. Such a generalized motivation is **not** a "motivating force" that would "impel" persons of ordinary skill to modify the respective teachings of the cited references and achieve the claimed invention.

The Office has failed to show any motivation as to why a person of ordinary skill in the art would combine the references Malik, Dropulic, Kataoka, and Horvai. There is nothing in any of the references that would "impel" one of ordinary skill in the art to make the combination or modification. The Office has failed to show that a person of ordinary skill in the art would have an expectation of success based on the

combination of the references. The Office only uses the general statement that there would have been "a reasonable expectation of success." The Office provides no specific reason or evidence as to *why* a person of ordinary skill in the art would have an expectation of success.

The only motivation t to combine the references requires the use of the Applicants' specification and hindsight reconstruction, which is strictly forbidden. *In re Fine*, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988) ("One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."). When assessing whether or not a combination of references would have produced a claimed invention, one must consider the teaching of each reference as a whole without undue emphasis on those features that would support a finding of obviousness. *In re Wesslau*, 147 U.S.P.Q. 391 (C.C.P.A. 1965) (it is impermissible to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what the references fairly suggest to one of ordinary skill in the art).

Consideration of the cited references as a whole for what they each fairly suggest, demonstrates that a person of ordinary skill seeking to combine them would not have produced any claimed invention. In this respect, the Office Action has apparently picked one particular element from Malik, one particular element from Dropulic, one particular element from Kataoka, and one particular element from Horvai. One skilled in the art, however, would ***not*** be motivated to pick and choose only those specific elements referred to in the Office Action from the many elements recited in the references and combine the selected elements in the specific manner indicated in the Office Action. Indeed, it appears that the only guide to picking and choosing particular elements from the cited art of records appears to have been the present application. Thus, the combination of references is improper for, at the very least, failure to provide motivation to combine references and for its use of hindsight reconstruction based upon Applicants' disclosure.

The Federal Circuit has recently affirmed the requirement for motivation to combine references, stating that:

> virtually all [inventions] are combinations of old elements. Therefore, an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed [**10] elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention . . .
>
> To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and ***with no knowledge of the claimed invention***, would select the elements from the cited prior art references for combination in the manner claimed . . .
>
> To counter this potential weakness in the obviousness construct, the suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness.

Yamanouchi Pharm. Co. v. Danbury Pharm, Inc., 231 F.3d 1339 (Fed. Cir. 2000); 56 U.S.P.Q.2D 1641, 1645, citing *In re Rouffet*, 149 F.3d 1350, 1357-58, 47 USPQ2d 1453, 1457-8 (Fed. Cir. 1998) (emphasis supplied).

It appears that the Office has done what Yamanouchi reaffirms should not be done -- used Applicants' specification as a blueprint.

However, even if the cited references are combined, the combination of the references does not yield the claimed invention. None of the references alone or in combination discuss or even suggest a method of delivering a protein to a macrophage

cell or a cell of macrophage derived lineage of an individual comprising the steps of: administering to the individual at a site on the individual's body, a DNA molecule comprising a nucleotide sequence that encodes the protein, wherein the DNA molecule is operably linked to a macrophage specific promoter and a polyadenylation signal that are functional in a macrophage cell and/or a cell of macrophage derived lineage, wherein the DNA molecule is taken up by a macrophage cell and/or a cell of macrophage derived lineage where the nucleotide sequence is expressed to produce the protein in the macrophage cell and or the cell of macrophage derived lineage.

Therefore, the references cited in the Office Action would not provide the necessary motivation to "impel" a person of ordinary skill in the art to modify the references because there would be no expectation of success since the molecules are different from the administered DNA molecule of the claimed invention. As discussed above, it appears that the only suggestion to obtain the claimed invention is the Applicants' specification, which is strictly prohibited.

Additionally, the present invention provides an unexpected result that the administration of a DNA molecule to an individual can result in the expression of a protein in a macrophage cell or a cell of macrophage derived lineage. The Applicants have invented a method of delivering a protein to a macrophage cell or a cell of macrophage derived lineage comprising the steps recited in the pending claims. None of the references cited suggest that such an invention is possible or indicate that one could specifically express a protein in a macrophage cell or a cell of macrophage derived lineage using a DNA molecule with a macrophage specific promoter. The unexpected result is that one is able to target a macrophage cell or a cell of macrophage derived lineage by injecting a DNA molecule is novel and ***not*** obvious.

Thus, in view of the foregoing, Applicants respectfully submit that the Office has failed to establish a *prima facie* case of obviousness. Accordingly, Applicants respectfully request the rejection under 35 U.S.C. § 103(a) be withdrawn.

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PATENT APPLICATION

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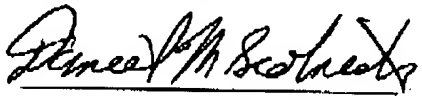
Conclusion

Applicant believes the claims are in condition for allowance. An early Notice of Allowance is therefore earnestly solicited. Applicant invites the Examiner to contact the undersigned at (215) 665-6928 to clarify any unresolved issues raised by this response.

Respectfully submitted,



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